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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,865	07/02/2001	Giorgio Trapani	M0023/7005	1378
22832	7590	02/03/2005	EXAMINER	
KIRKPATRICK & LOCKHART LLP			CURTIS, CRAIG	
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BOSTON, MA 02109-1808			PAPER NUMBER	
			2872	

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/897,865

Applicant(s)

TRAPANI ET AL.

Examiner

Craig Curtis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Disposition of the Instant Application*

- This Office Action is responsive to Applicants' Remarks filed on 15 October 2004, which have been made of record in the file.
- In addition to their remarks, Applicants submitted a terminal disclaimer to obviate a double-patenting rejection asserted in the outstanding Office Action with respect to US Patent No. 6,630,970. This terminal disclaimer, filed on 15 October 2004, which disclaims the terminal portion of any patent granted on this application that would extend beyond the expiration date of July 2, 2021, has been reviewed and accepted. The terminal disclaimer has been recorded.
- Claims 1-27 are presently pending in the instant application.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-6, 13, 15, 17-20, and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. (JP200258772A) in view of Binda (US 2,445,555).**

**With regard to claim 1, Kumagai et al. disclose the invention as claimed—[a]n optical stack, comprising: a polarizer [see 2A in Fig. 5], having a first surface [see the uppermost surface of the polarizer 2A depicted in Fig. 5, that is, the surface of 2A fronting the lowermost surface of**

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phase-type diffraction layer 1A], the polarizer lacking a heat and moisture resistant [read: heat- and moisture-resistant] protective coating and a support layer thereon [see polarizer 2A in Fig. 2A, although it is noted that Applicants have not set out the *degree* to which said polarizer lacks a heat- and moisture-resistant protective coating—the point being that any coating (including the optically functional coatings disclosed by Applicants) would provide, at the very least, some degree of heat- and moisture-resistance protection]; and

a first optically functional coating [namely, phase-type diffraction layer 1A, which indisputably is optically functional] disposed on the first surface of the polarizer—**EXCEPT FOR** an explicit teaching wherein said polarizer is an intrinsic polarizer, the **Kumagai et al.** reference being silent as to the precise nature/type of the polarizer(s) disclosed therein.

**Binda**, however, discloses an intrinsic polarizer [see Fig. 1 & column 6, lines 41-72]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of **Kumagai et al.** such that its polarizer be of the intrinsic variety, such being taught by **Binda**, for at least the purpose of availing himself or herself of an exceedingly well-known and robust polarizer material to realize said optical stack.

**With regard to claim 2**, the combination further discloses wherein said intrinsic polarizer has a second surface [see the lowermost surface of the polarizer 2A depicted in Fig. 5 of Kumagai et al., that is, the surface of 2A fronting the uppermost surface of optical compensation layer 3A], and further comprising

a second optically functional coating [namely, optical compensation layer 3A, which indisputably is optically functional] disposed on the second surface of the intrinsic polarizer.

**With regard to claims 3 and 4**, the intrinsic polarizer taught by **Binda** satisfies each of the definitional criteria Applicants have associated in their specification with K-type polarizers, KE polarizers simply being a type of K-type polarizer. Cf., e.g., the descriptive annotations made to the figure in **Binda** with the language Applicants use to describe K-type polarizers in their specification: especially that recited in ¶[9] on p. 3 of same.

**With regard to claim 5**, it is submitted that the first optically functional coating of the optical stack of **the combination** [namely, the optical compensation layer 3A disclosed by Kumagai et al.] is, to however small a degree, a hardcoat [the provisioning of hardcoat layers to optical stacks being, moreover, a notoriously old and well-known practice in the optical art].

**With regard to claim 6**, inasmuch as said light necessarily both reflects [even if only the nominal 4% Fresnel reflection amount exacted from normally incident light] from and transmits through the first optically functional coating of **the combination**, said first optically functional coating can reasonably be said to comprise a transflector coating.

**With regard to claim 13**, it is submitted that each of the above-identified constituent layers/coatings of said first optically functional coating of **the combination** provides some measure of diffusion, and as such any one of same may reasonably be viewed as meeting the limitation recited in this claim that said first optically functional coating comprise a diffusion coating.

**With regard to claim 15**, **the combination** discloses wherein at least said phase-type diffraction element layer 1A and the optical compensation layer 3A of the first optically functional coating [see 1A and 3A in Fig. 5 of **Kumagai et al.**] serve to mitigate "...problems caused by the dependence on the viewing angle of the liquid crystal display" [see SOLUTION:

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section of English language abstract of **Kumagai et al.**], a disclosure that is taken as meeting the limitation recited in this claim wherein said first optically functional coating comprises a wide view [read: wide-view] film.

**With regard to claim 17, the combination** further discloses wherein the intrinsic polarizer has a second surface [see the lowermost surface of polarizing layer 2A in Fig. 5 of **Kumagai et al.**], and further comprises a layer of adhesive [i.e., 5] disposed on the second surface of the intrinsic polarizer.

**With regard to claim 18, the combination** further discloses wherein the intrinsic polarizer is attached to a liquid crystal display cell [see 4 in Fig. 5 of **Kumagai et al.**] by the layer of adhesive.

**With regard to claim 19,** although the combination is silent as to the precise nature of said adhesive layer, the use of pressure-sensitive adhesives is notoriously old and well known in the display art, and as such the use of same would have been obvious to one having ordinary skill in the art at the time the invention was made, for at least the purpose of availing oneself of an exceedingly well-known and robust adhesive.

**With regard to claim 20,** it is submitted that virtually any layer of adhesive, including those taught by the combination, exhibits, to however small a degree, diffusive characteristics vis-à-vis light incident thereon and/or therethrough.

**With regard to claim 23, the combination** discloses as set forth above each of the structural elements recited in this claim: a K-type polarizer having a first surface and a second surface, the K-type polarizer lacking a heat and moisture protective coating and a support layer thereon [see Fig. 1 & column 6, lines 41-72 in **Binda**, as well as 2A in Fig. 5 of **Kumagai et al.**];

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a first optically functional coating [i.e., at least phase-type diffraction layer 1A in Fig. 5 of **Kumagai et al.**] disposed on the first surface of the K-type polarizer; and

a second optically functional coating [e.g., at least optical compensation layer 3A in Fig. 5 of **Kumagai et al.**] disposed on the second surface of the K-type polarizer.

**With regard to claims 24-27**, the method steps set out in these claims are implicitly met by the structural teachings of the combination set out hereinbefore.

**2. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. (JP200258772A) in view of Binda (US 2,445,555).**

**With regard to these claims**, the combination discloses the invention as claimed **EXCEPT FOR** explicit teachings wherein, respectively, the thickness of the optical stack is less than 25 microns and about 25 microns.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have assembled the above-recited optical stacks such that the thickness of same be less than or about 25 microns, for at least the purpose of decreasing the amount of material needed to construct said stack(s), because such a modification would have involved a mere change in the size of a component, and a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

**3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. (JP200258772A) in view of Binda (US 2,445,555), as applied above to (among others) claims 1 and 6, and further in view of Tanaka et al. (US 6,535,337 B1).**

**The combination** discloses the claimed invention as set forth above **EXCEPT FOR** explicit teachings wherein (1) said transflector coating comprises a layer of metal, and (2) said first optically functional coating comprises a reflector coating. **Tanaka et al.**, however, explicitly disclose a polarizer comprising a transflective metal layer (it being noted that Tanaka et al. disclose wherein layer 1 taught therein may be either transflective or reflective: see, e.g., column 3, lines 7-10 & column 4, lines 39-53). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of the combination such that its transflector coating comprise a layer of metal, as well as such that said first optically functional coating comprise a reflector coating, such teachings having been made explicit by **Tanaka et al.**, for at least the purpose of achieving a desired brightness/contrast performance.

4. **Claims 9-11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. (JP200258772A) in view of Binda (US 2,445,555), as applied above to (among others) claim 1, and further in view of Hawa et al. (US 6,800,378 B2).**

**With regard to claim 9**, the combination discloses the claimed invention as set forth above **EXCEPT FOR** an explicit teaching wherein the first optically functional coating comprises an antireflection film.

**Hawa et al.**, however, explicitly disclose a teaching of a first optical coating [see, e.g., layers 16, 18 depicted in Fig. 1] comprising an antireflection film [*id.*; also see column 3, lines 61-67—column 4, lines 6]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of the combination such that its



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first optically functional coating comprise an antireflection film, such teaching having been made explicit by **Hawa et al.**, for at least the purpose of ensuring that light incident upon said optical stack not needlessly be lost due to preventable reflection losses.

**With regard to claim 10, Hawa et al.** additionally disclose wherein said antireflection film comprises a plurality [read: two or more] polymer layers. See, e.g., column 7, lines 8-20, particularly lines 16-20.

**With regard to claim 11, Hawa et al.** additionally disclose wherein said antireflection film comprises a plurality of inorganic layers. See, e.g., column 4, lines 57-59.

**With regard to claim 14,** the Examiner notes that the terms antiglare film and antireflection film are art-recognized equivalents, and as such Applicants are respectfully directed to the remarks made hereinbefore regarding the antireflection film first recited in claim 9.

5. **Claims 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. (JP200258772A) in view of Binda (US 2,445,555), as applied above to (among others) claim 1, and further in view of VanderPloeg et al. (US 5,895,106).**

**With regard to claim 12, the combination** discloses the claimed invention as set forth above **EXCEPT FOR** an explicit teaching wherein said first optically functional coating comprises a liquid crystal polymer retarder compensation film.

**VanderPloeg et al.**, however, explicitly disclose an optically functional coating [namely elements 7, 6, 4, 2, and 5, as depicted in Fig. 1] that comprises a liquid crystal polymer retarder compensation film [either 6 or 2]: column 8, lines 7-13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention

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of the combination, in accordance with the teachings set forth by VanderPloeg et al., such that its first optically functional coating comprise a liquid crystal polymer retarder compensation film, for at least the purpose of providing improved contrast and reducing gray-level inversion.

**With regard to claim 16**, the teaching by the combination wherein the first optically functional layer comprises a liquid crystal polymer retarder compensation film implicitly encompasses the provisioning of one or more electrodes.

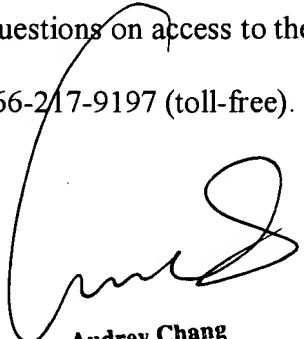
### **Contact Information**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Curtis, whose telephone number is (571) 272-2311. The examiner can normally be reached on Monday-Friday, 9:00 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn, can be reached at (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*C.H.C.*  
Craig H. Curtis  
Group Art Unit 2872  
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Audrey Chang  
Primary Examiner  
Technology Center 2800